DOCUMENT RESUME

ED 478 709 PS 031 429

TITLE	Mississippi Pre-Kindergarten Curriculum: Including Benchmarks, Informal Assessments, and Suggested Teaching Strategies.
INSTITUTION	Mississippi State Dept. of Education, Jackson.
PUB DATE	2001-00-00
NOTE	68p.
AVAILABLE FROM	Mississippi Department of Education, P.O. Box 771, 359 North West Street, Jackson, MS 39205. Tel: 601-359-3515; Fax: 601-359-3033; Web site: http://www.mde.k12.ms.us.
PUB TYPE	Guides - Non-Classroom (055)
EDRS PRICE	EDRS Price MF01/PC03 Plus Postage.
DESCRIPTORS	Benchmarking; *Classroom Techniques; *Early Childhood Education; *Educational Quality; Emergent Literacy; Evaluation Criteria; Intervention; *Preschool Curriculum; Prevention; Reading Readiness; School Readiness
IDENTIFIERS	*Mississippi

ABSTRACT

Recognition of the significance of early years has heightened interest and support for early childhood programs. Prevention steps designed to reduce the number of children who arrive at school with inadequate literacy-related knowledge would considerably reduce the number of children with reading difficulties. While there is great potential for producing positive and lasting effects on children, this potential will not be achieved unless all programs meet the highest standards of quality. The Mississippi Pre-Kindergarten Curriculum is designed to direct schools in establishing and administering developmentally appropriate pre-kindergarten programs that meet these standards. This document was designed as an optional resource guide for use by Mississippi school districts providing pre-kindergarten programs across the state. The framework contains three prevention/intervention components: (1) benchmarks (what children should know and be able to do); (2) assessments (informal and observational assessments to determine if benchmarks are being met); and (3) instructional prevention/intervention strategies (specific intervention tasks that will assist a child in meeting a benchmark). These benchmarks, assessments, and instructional prevention/intervention strategies are designed to ensure that children enter kindergarten with the conceptual understandings necessary to be successful learners. (Contains a list of 33 resources, 7 software titles for scientific investigation, and appropriate educational materials. (HTH)

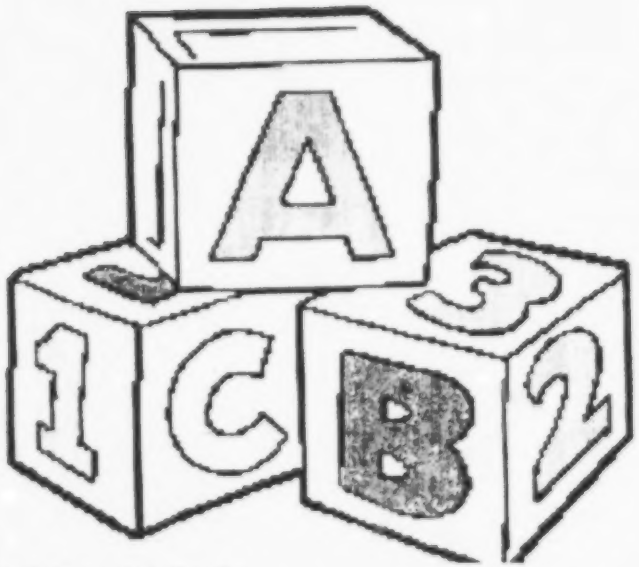
Reproductions supplied by EDRS are the best that can be made
from the original document.

Ps PSTR
0098

ED 478 709

MISSISSIPPI
PRE-KINDERGARTEN CURRICULUM

Including Benchmarks, Informal Assessments
and
Suggested Teaching Strategies



U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
X This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
S. Williams
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
1

Quality Education for Every Child . . . Every Child A Reader
Mississippi Department of Education

PS 031429

BEST COPY AVAILABLE

MISSISSIPPI PRE-KINDERGARTEN CURRICULUM

Including Benchmarks, Informal Assessments and Suggested Teaching Strategies

2001

Richard Thompson, State Superintendent of Education
Susan Rucker, Associate State Superintendent of Academic Education
Bonita Coleman-Potter, Bureau Director of Reading, Early Childhood, and Language Arts

Mississippi Department of Education
P. O. Box 771, Jackson, MS 39205
(601) 359-3778

Table of Contents

Introduction i

Acknowledgement

Pre-Kindergarten Science Committee. ii

Pre-Kindergarten Guidelines Writing Team ii

Pre-Kindergarten Framework Writing Team. ii

Learning Principles iv

Pre-Kindergarten Philosophy and Goals v

Mississippi Pre-Kindergarten Guidelines

1.0 Curriculum. 1

2.0 Organizational Procedures 2

3.0 Physical Settings 2

4.0 Outside Play Area 2

5.0 Staff 3

6.0 Entrance Age 4

7.0 Educational Materials 4

8.0 Parent Participation 4

9.0 Assessment 4

10.0 Transportation 5

Mississippi Pre-Kindergarten Framework

Language Development: The Gateway to Reading Success

Benchmarks 6

Informal Assessments 8

Suggested Teaching Strategies 11

Mathematics Language Development: Math Concepts

Benchmarks 17

Informal Assessments 18

Suggested Teaching Strategies 20

Social/Emotional Development

Benchmarks 25

Observational Assessment for Working with Families. 27

Suggested Teaching Strategies 29

Physical Development: Fine, Gross, and Sensory Motor Development

Benchmarks. 34

Informal Assessments 35

Suggested Teaching Strategies 36

Scientific Investigation

Benchmarks. 40

Informal Assessments 42
Suggested Teaching Strategies 44

Resources 52

Educational Materials. 55

Introduction

The *Mississippi Pre-Kindergarten Curriculum* was developed as a part of the Mississippi Board of Education's Reading Initiative. This document was designed as an optional resource guide for use by Mississippi school districts providing pre-kindergarten programs across the state. It represents the expertise and experience of a writing team of early childhood professionals who have worked to interpret appropriate practice in programs for young children.

Recognition of the significance of the early years has heightened interest and support for early childhood programs. Prevention steps designed to reduce the number of children who arrive at school with inadequate literacy-related knowledge would considerably reduce the number of children with reading difficulties. Specifically, important experiences related to reading begin very early in life. "Childhood environments that support early literacy development and excellent instruction are important for all children. Excellent instruction is the best intervention for children who demonstrate problems learning to read." (National Research Council, 1998, p.3). Conclusive research demonstrates that high-quality, developmentally appropriate early childhood programs produce short and long-term positive effects on children's cognitive and social development (Barnett, 1995). While there is great potential for producing positive and lasting effects on children, this potential will not be achieved unless all programs meet the highest standards of quality. The *Mississippi Pre-Kindergarten Curriculum* is designed to direct schools in establishing and administering developmentally appropriate pre-kindergarten programs that meet these standards.

This framework contains three prevention/intervention components:

- **Benchmarks** (What children should know and be able to do)
- **Assessments** (Informal and observational assessments to determine if benchmarks are being met)
- **Instructional Prevention/Intervention Strategies** (Specific intervention tasks that will assist a child in meeting a benchmark)

The benchmarks, assessments, and instructional prevention/intervention strategies are designed to ensure that children enter kindergarten with the conceptual understandings necessary to be successful learners. **This framework should be utilized to assist teachers in making informed instructional decisions and is not to be used for promotion/retention purposes.**

Acknowledgements

The Mississippi Department of Education gratefully acknowledges the contribution of the Pre-Kindergarten Work Groups for graciously providing their expertise, time, and efforts in developing this curriculum guide for teachers of pre-kindergarten.

Pre-Kindergarten Scientific Investigation Work Group

Carol Bishop, Lift, Inc. Head Start
Carol Burnett, MS Department of Human Services, Office of Children and Youth
Peggy Emerson, University of Mississippi, Department of Education
Cathy Gaston, Friends of Children of MS, Inc.
Cathy Grace, Early Childhood Institute, Mississippi State University
Laura Beth Hebbler, MS Department of Education, Office of Reading, Early Childhood, and Language Arts
Lisa Lumpkin, Moore Community Early Head Start
Lynne Masters, MS Department of Education, Head Start Collaboration Office
Jean Shaw, University of Mississippi, Department of Education, retired

Pre-Kindergarten Guidelines Work Group

Carolyn Alexander, MS Department of Education, Office of Teacher Licensure
Dot Bowman, MS Department of Education, Office of Special Education
Will Carter, MS Department of Education, Office of School Building and Transportation
Carla Dearman, MS Department of Education, Office of Instructional Development
Kathy Ellis, MS Department of Education, Office of Innovative Support/Even Start
Dorothy Gaston, MS Department of Health
Regina Ginn, MS Department of Education, Office of School Building and Transportation
Cathy Grace, Lee County School District and Tupelo Family Resource Center
Diane Herring, MS Department of Health
R. E. Jenkins, MS Department of Health
Capucine Robinson, Jackson Public School District
Susan Rucker, MS Department of Education, Office of Instructional Development
Nancy Senter, MS Department of Education, Office of Instructional Development

Pre-Kindergarten Framework Work Group

Lori Alford, Clinton Public School District
Gloria Allen, Brookhaven Public School District
Kim Benton, Meridian Public School District
Margaret Boyd, New Albany Public School District
Caroline Brenke, Ocean Springs School District
Joan Butler, Starkville Public School District
Jane Cockrell, Long Beach School District
Mary Catherine Cole, West Point School District

Teresa Coleman, Brookhaven Public School District
Nadine Coleman, Petal School District
Judy Davis, Greenville Public School District
Nan Davis, Hattiesburg Public School District
Danielle DesAngles, Pass Christian Public School District
Cathy Gaston, Friends of Children of MS, Inc.
Cathy Grace, Lee County School District and Tupelo Family Resource Center
Deborah Herndon, Aberdeen Public School District
Amanda Martin, Madison County School District
Jane Nash, Pearl Public School District
Lina Owens, University of Mississippi
Capucine Robinson, Jackson Public School District
Carolyn Satterfield, Benoit School District
Patricia Sawyer, Alcorn County School District
Ruth Searcy, Jackson State University
Ella Seay, West Point School District
Peggy Taylor, South Delta School District
Diane Thomas, Coahoma County School District
Sue Townsend, Rankin County School District
Donna Trigg, Jackson County School District
Dale Warriner, Tupelo Public School District
Marsha Webb, Franklin County School District
Katherine Wilson, Bay St. Louis-Waveland School District
Blanche Young, Hinds County Project Head Start

Learning Principles

Effective educational planning for young children takes into account knowledge of human growth and development. The learning principles that guide this planning include the following:

1. Children learn as total persons (emotionally, socially, physically, and intellectually).

2. Children go through similar stages of development, but at individual rates.

3. Children learn through their senses (hearing, seeing, touching, tasting, and smelling).

4. Children learn through active involvement (exploring, playing, manipulating, and problem-solving).

5. Children learn through attitudes as well as through content; therefore, attention should be given to methods, emotional climate, environment, and teacher-child interaction.

6. Children learn through attitudes as well as through content; therefore, attention should be given to methods, emotional climate, environment, and teacher-child interaction.

7. Children learn through experiences; therefore, sensitivity to the value of play is required, for it is through play that children create their own meaning and learning schemes. Play is the work of the child.

Pre-Kindergarten Philosophy and Goals

The pre-kindergarten program shall reflect an understanding of child development principles. These principles shall be embodied in the curriculum design and general learning environment. The instructional delivery is to be organized around learning centers where opportunities are provided for children to acquire skills and concepts involving problem-solving, decision-making, questioning, evaluating, and discovering.

The realistic goals for pre-kindergarten education are as follows:

1. To help the child develop a positive self-concept
2. To help the child achieve intellectual growth
3. To help the child enlarge his/her world of people, experiences, ideas, and things
4. To help the child increase competence and skills in reading, writing, listening, thinking, and speaking
5. To help the child increase the skills involved in physical coordination
6. To help the child increase competence in dealing with emotional feelings and social situations
7. To help the child increase competence in self-direction and independence
8. To help the child develop cooperative trusting relationships
9. To help the child develop his/her natural curiosity and his/her creative potential

Mississippi Pre-Kindergarten Guidelines

1.0 Curriculum

1.1 The instructional day shall include all aspects of the child's day.

1.2 Subjects for pre-kindergarten shall be integrated through a unit/thematic format.

1.3 The curriculum shall include integrated language arts, music, art, mathematics, social studies, science, dramatic play, and physical activities, as well as activities to develop social/emotional competencies.

1.4 The primary instructional method for the delivery of the curriculum will be learning centers. A minimum of three centers containing concrete manipulative materials shall be in simultaneous use during each designated center time. To best integrate the content of the benchmark areas, as well as unit concepts into learning centers, the following emphasis should be reflected in the materials and learning opportunities provided in these suggested centers:

1. Creative Arts Center (benchmark areas: language, physical development, social/emotional development, and math concepts)
2. Science Center (benchmark areas: language, science, and math concepts)
3. Math Center (benchmark areas: math concepts, language, and physical development)
4. Language Development Center (benchmark areas: language and social/emotional development)
5. Cooking Center (benchmark areas: math, language and physical development)
6. Blocks, Wheel Toys, and Construction Center (benchmark areas: physical and social/emotional development, and math)
7. Sand and/or Water Center (benchmark areas: math, language, science, and physical development)
8. Woodworking Center (benchmark areas: language and physical development)
9. Music Center (benchmark areas: language, physical, social/emotional development)
10. Library Center (benchmark areas: language and social/emotional development)
11. Listening Center (benchmark areas: language and social/emotional development)
12. Dramatic Play Center (benchmark areas: language and social/emotional development)

13. Creative Writing Center (benchmark areas: language, math, science and social/emotional development)
14. Social Studies Center (benchmark areas: language and math development)
15. Technology Center (benchmark areas: language, science, and math development)

1.5 Every child is to be engaged in learning center activities for a minimum of 100 minutes per day.

1.6 Teachers are to use, at a minimum, the resources developed by the Mississippi Department of Education in curriculum planning, such as the Mississippi Curriculum Frameworks. Other additional resources may be added as desired by each school district.

2.0 Organizational Procedures

2.1 The teacher-pupil ratio shall be 1:10 maximum. If an assistant teacher is assigned to the pre-kindergarten classroom, the teacher-pupil ratio shall not exceed 1:20.

2.2 The length of the school day should be the same as that of the other grades of the elementary school.

2.3 The length of the school term should be the same as that of the other grades of the elementary school.

2.4 Students will participate in physical indoor/outdoor activities that shall not exceed 60 minutes during the school day. The 60 minutes do not have to take place continuously.

2.5 Students will engage in a minimum of 30 minutes of quiet time daily that shall not exceed 60 minutes. Activities during quiet time may include individual activities, listening to books on tape, drawing, or resting, as appropriate for each individual student.

3.0 Physical Settings

3.1 All physical settings shall conform to applicable sections of Southern Building Codes, Life Safety Codes, the American Disabilities Act, and the Mississippi Kindergarten Guidelines.

4.0 Outside Play Area

4.1 A designated area for outside periods during the pre-kindergarten day shall be provided.

4.2 Pre-kindergarten students shall not simultaneously share an area with children in grades two or above during designated outside periods.

4.3 The outside play area shall have defined enclosed boundaries to protect children from environmental hazards, such as traffic and/or stray animals.

4.4 Appropriate playground equipment and landscape design should be provided to facilitate learning and ensure safety, which meet Handbook Guidelines for Public Playground Safety. Handbook for Public Playground Safety, Pub.No.325, http://www.cpsc.gov

5.0 Staff

5.1 Each school district shall designate an Early Childhood Coordinator with N-1, K-3 or K-8 licensure and expertise in working with young children. The principal or a pre-kindergarten teacher may serve as Coordinator.

5.2 Administrators of early childhood programs must attend any School Executive Management Institute (SEMI) module that addresses pre-kindergarten through third grade programs and includes developmentally appropriate practices.

5.3 School systems must provide annual training related to principles and methods of early childhood education and reading instruction for new and veteran pre-kindergarten teachers, assistant teachers, and program administrators and/or coordinators.

5.4 All persons responsible for supervising the pre-kindergarten program must attend workshops and/or seminars sponsored by the Mississippi Department of Education regarding pre-kindergarten implementation and supervision.

5.5 Pre-kindergarten teachers are to be certified N-1, K-3, K-8, SPED or hold a degree from an accredited university/college in child development. An individual with an AA degree in Child Development Technology may serve in a teaching position if immediately supervised by an on-site certified N-1, K-3, K-8, SPED teacher or a person with a degree in child development from an accredited university/college. If the individual holds a degree in child development and has experience working in a pre-K program, that person may qualify for an expert citizen license.

6.0 Entrance Age

6.1 A pre-kindergarten pupil shall have reached the age of four years on or before September 1.

6.2 A birth certificate and immunization record is required for all pre-kindergarten students and shall be presented to the proper school authority.

7.0 Educational Materials

7.1 The initial expenditure for any new classroom equipment, instructional materials, and consumable supplies shall be adequate to equip a classroom of twenty (20) students.

7.2 The district is replenish the consumable supplies and instructional materials in each classroom on a yearly basis. This money is in addition to the Educational Enhancement Fund monies allocated to each teacher.

7.3 Educational materials shall reflect the instructional needs and implementation of learning activities described for pre-kindergarten.

8.0 Parent Participation

8.1 Each school district shall develop and distribute a parent handbook.

8.2 Teacher/parent conferences shall be conducted twice during the pre-kindergarten year to inform parents or guardians of students' progress. If documented attempts to meet with parents or other responsible persons fail, telephone conferences can be substituted.

9.0 Assessment

9.1 Pencil-paper standardized tests are not appropriate evaluation measures for pre-kindergarten children and will not be used.

9.2 Assessment of pre-kindergarten skills should be documented through the use of a variety of techniques and procedures to include checklists, performance scales, portfolios of children's work, anecdotal records, observational reports, video and audio tape recordings, experience charts, photographs, and other informal assessments.

9.3 Continuous evaluation through use of a variety of techniques, procedures, and tools will be used to determine individual needs.

10.0 Transportation

10.1 Transportation is an option.

10.2 All districts choosing to transport students shall refer to MS Code Section 37-41-3: All liability and related expenses are the responsibility of the districts.

10.3 All four year old students shall be transported in school buses meeting Federal Motor Vehicle Safety Standards (FMVSS) for school buses.

10.4 When transporting four-year-old students, the most current guidelines recommended by the National Highway Transportation Safety Association (NHTSA) shall be followed.

10.5 In addition to NHTSA the following caregiver/student ratio should be followed when transporting pre-kindergarten students:

- If 5 to 16 pre-kindergarten students are being transported on a bus, one caregiver, in addition to the driver, should be on the bus.
- If 17 to 32 pre-kindergarten students are being transported on a bus, two caregivers, in addition to the driver, should be on the bus
- Caregivers shall be 18 years of age or older.
- Caregivers shall be a school district employee or Head Start.
- Staffing shall be a minimum of one driver and one caregiver.

Pre-Kindergarten Benchmarks

Language Development: The Gateway to Reading Success

O - means teacher should be able to observe naturally throughout the day—possibly use anecdotal records.
I - Informal Assessment—those marked "I" have an assessment task attached.

Demonstrates an awareness of print

1) O - Develops left to right progression
2) O - Develops an understanding of top to bottom directions
3) O - Holds a book in the correct way
4) I - Recognizes local environmental print
5) O - Understands that print conveys meaning
6) I - Recognizes first name in print
7) I - Names (8-10) letters especially those from own name
8) I - Matches same letters (visual discrimination—uppercase to uppercase, lowercase to lowercase)
9) O - Attempts writing (scribble/drawing)
10) O - Understands that different text forms are used for different functions of print

Constructs meaning when responding to a story read or to a picture

11) O - Joins in reading of predictable/pattern books
12) O - Produces an imagined story to accompany pictures
13) O - Begins to predict an outcome
14) O - Develops an awareness of cause and effect
15) O - Begins to differentiate reality from fantasy
16) O - Shows an interest in books and reading
17) O - Connects information from a story to life experiences
18) O - Demonstrates understanding of literal meaning of story through questions and comments

Exhibits developmentally appropriate oral language for communication purposes

19) O - Expresses wants, needs, and thoughts in primary language (makes choices)
20) O - Retells a familiar story using own words
21) O - Dictates a story
22) O - Retells a personal story
23) O - Responds to questions in conversation using words and phrases in the primary language
24) O - Participates in conversation while interacting with peers
25) O - Recalls sequence of events
26) O - Uses positional words in proper context
27) O - Uses phrases and simple sentences
28) O - Interprets pictures orally
29) O - Uses new vocabulary and grammatical constructions in own speech
30) O - Repeats favorite rhymes and songs

Begins to demonstrate phonemic awareness

31) O - Distinguishes sound units/syllables (clapping/stomping/finger tapping)
32) I - Recognizes rhyming words
33) I - Begins to notice beginning phonemes/sounds (no graphemes/letters)

Develops listening skills

34) O - Understands and follows oral directions
35) I - Listens attentively to a story
36) O - Listens to music

Informal Assessments

Language Development: The Gateway to Reading Success

In developing informal assessments, teachers should consider what the relevancy is in completing the sample task. In the world of today, why do students need to be able to recognize their name? If the answer is to be able to identify themselves in a social setting, the sample task should reflect that need.

Guiding Questions	Task Sample
(4) Does the student recognize local environmental print?	Provide the student with environmental print (e.g., McDonald's, Burger King) games, activities, or books and ask the student to name known logos and signs. Keep an on-going record of responses.
(6) Does the student recognize his/her name in print?	When the student arrives in the classroom, the student will move his/her name that is on a clothespin, index card, or sentence strip to a board, string or cup that shows the student is present, brought lunch or eating in cafeteria, etc. Using name blocks, the student will identify own name when doing a class graph, etc.
(7) Can the student name some upper/lowercase letters (8-10)?	Provide the student with an uppercase/ lowercase manipulative alphabet (plastic, cardboard pieces, etc.), and ask the student to select the letters known and name them. Keep a record of correct and incorrect responses. While playing an alphabet bingo game, note the letters (uppercase or lowercase) the student marks correctly. Make a classroom pictionary and place it in the library or dramatic play area. Use the pictionary by asking the student to name the pictures and letters found on various pages.

Guiding Questions		Task Sample
(8)	Can the student match some letters?	Develop a class telephone book. Provide the student with a card on which a letter of the alphabet is written. The student is to find the same letter in the class telephone book. Provide the student with two (2) sets of four like- letters. Ask the student to put them in pairs. Keep a record of those letters correctly and incorrectly matched.
(32)	Can the student match rhyming words and pictures?	Provide objects or pictures representing rhyming words for students. After listening to two rhyming words (e.g., boy-toy), the student will match objects or pictures. Provide books, songs, and poetry for the student to complete orally in a cloze activity.
(33)	Can the student recognize two pictures or objects that begin with the same sound? Can the student reproduce the first phoneme/sound heard in a word?	The student will reproduce the beginning sound heard in a word that the teacher says (e.g., teacher says [cat], student says [c].

Suggested Teaching Strategies

Language Development: The Gateway to Reading Success

Demonstrates an awareness of print

1) Develops left to right progression
   - Demonstrate left to right direction by using movement skills (e.g., hop, skip, jump, leap, run, slide, gallop, and walk).
   - Use a mirroring technique to have students follow what the teacher does, while listening to music. The teacher will be the leader and the students will follow movement from left to right accompanied by music.
   - Use colored dots such as green dots, where print or pictures begin, and red dots where it ends.
   - Model left to right progression as the class shares a big book.
   - Use a flashlight and have students follow it with their eyes as it moves across the wall or ceiling.

2) Develops an understanding of top to bottom directions
   - Use paint or markers to draw lines from top to bottom on newsprint.
   - Model top to bottom progression as the class shares a big book.

3) Holds a book in the correct way
   - Model holding a book correctly and point out correct way to turn pages.
   - Use student-made books to identify parts of a book.

4) Recognizes local environmental print
   - Display and discuss familiar logos (e.g., McDonald's, Burger King).
   - Create a lotto game using environmental logos (similar to Bingo).
   - Create a road board game using familiar locations as destinations (e.g., Wal-Mart, McDonald's).

5) Understands that print conveys meaning
   - Label classroom objects.
   - Use language experience stories.
   - Use journals to write the students' words.

6) Recognizes first name in print
   - Create name tags for each student and allow the student to pick a shape for the name tag. The student observes the teacher writing his/her name.
   - Label students' spaces in the room (e.g., chair, coat space, cubbie) with his/her name.
   - Make name blocks using unit blocks or wood scraps (all the same size). On one side place the student's picture and on the other side, place the student's name. These can be used throughout the year for name recognition, etc.

7) Names (8-10) letters especially those from own name
   - Provide a name card for the student with his/her name printed on it. Play NAMO as you would Bingo. The student covers each letter of his/her name when the teacher calls it out. When all letters are covered, the student says, "NAMO."
   - Allow students to manipulate magnetic letters on cookie sheets. Students can name letters or use the letters to write their names.
   - Play Alphabet Soup. Decorate a can to look like alphabet soup. Inside the can, put either cards with letters written on them or plastic letters. Students can take turns dipping out letters with a soup spoon. The student names the letters scooped out. The teacher will help the student with any letters not known. Students can continue to scoop letters until letters are gone.
   - Make a floor game out of carpet squares with a letter on each square. The child can play on the carpet squares by hopping to the letters known—to the letter of first name and to the letter shown by the teacher. Initially present a few squares and gradually add squares.

8) Matches same letter (visual discrimination—uppercase to uppercase, lowercase to lowercase)
   - Provide concrete objects to match.
   - Provide games for picture matching (e.g., Dominoes).
   - Play concentration with letters written on cards.
   - Make available matching games to go with units being taught.
   - Print the letter on one shape and the same letter on the other shape. Students will match letters to their same letters.
   - Model using playdough by placing the dough on top of large individual letters on a card.

9) Attempts writing (scribble/drawing)
   - Ask the student to communicate the meaning of a life experience through drawing or scribble/writing.
   - Provide a writing center with papers, pencils, markers, crayons, magnadoodles, Etch-A-Sketch, etc.

10) Understands that different text forms are used for different functions of print
   - Provide paper and writing tools for students to create grocery lists, greeting cards, messages, etc.
   - Model the process of making lists for students.
   - Provide telephone books in dramatic play area.
   - Provide different forms that are used to convey information when setting up the dramatic play area as an office.

Constructs meaning when responding to a story or to a picture

11) Joins in reading of predicable/pattern books
- Read predictable books with students (e.g., Brown Bear, Brown Bear; Polar Bear, Polar Bear; Dr. Seuss books, nursery rhymes).
- Have students create a class predictable book based on a familiar text.

12) Produces an imagined story to accompany pictures
- Hold up a series of pictures, and students will describe the events and people in a small group.
- Display several pictures on the board. The student will choose a picture to tell a story through oral story telling. Group members will guess which picture goes with the story that was told by the student.
- Display several pictures on the board. The student will choose a picture and will dramatize a story that the picture might be telling. The student will act out the story using drama and/or dance movement. Group members will guess which picture goes with the dramatization.
- Make thematic picture files available in the language center.

13) Begins to predict an outcome
- Show the cover of a book. Ask students to predict what happens in the story. The teacher will record responses.
- Read part of a story and let the students predict how the story ends. Students may act out the ending.

14) Develops an awareness of cause and effect
- Present real life experiences for the student to determine cause and effect. For example:

Cause	*Effect*
Cold outside	*put on a coat*
Thirsty	*get something to drink*

- Tell simple stories and ask why things happen.
- Sing songs or nursery rhymes and ask why things happen or what caused it to happen (e.g., Humpty Dumpty—Why did he break into pieces?).

15) Begins to differentiate reality from fantasy
- Read a story. Ask questions such as "Could this really happen?" "Is this story real or make-believe?" For example, "Little Red Riding Hood."
- Show a picture and ask, "Is this real or make-believe?"

16) Shows an interest in books and reading
- Display interesting books so the students can choose a book to read.
- Ask students to bring or choose a favorite book from the class library for the teacher to read.

17) Connects information from a story to life experiences
- Listens to a story and relates it to a real-life experience (books with rhyme, repetition, and rhythm).

18) Demonstrates understanding of literal meaning of story through questions and comments
- Read a story and ask questions about the story. Utilize props to maintain student interest (e.g., story boards, flannel boards, and story aprons).

Exhibits developmentally appropriate oral language for communication purposes

19) Expresses wants, needs, and thoughts in primary language (makes choices)
- Offer opportunities to share. (Show and Tell)
- Provide opportunities to draw in journals and record students' words.
- Assist the student in expressing complete thoughts (e.g., "May I get a drink of water?").
- Provide opportunities to tell about art projects.

20) Retells a familiar story using own words
- Provide props (felt board, puppets, and dress-up clothes) in dramatic play center.
- Use role play and costumes to encourage student participation in retelling a story.

21) Dictates a story
- Allow students to draw a picture and dictate story to the teacher.
- Take dictation for a class story (e.g., after a field trip, after a class visitor, after a school program). Each student will be given an opportunity to participate.

22) Retells a personal story
- Allow students to use a personal event to draw pictures and provide students an opportunity to talk about the event depicted.
- Ask students to choose a favorite story or event that happened to them and share it with the class. The teacher will demonstrate by sharing a story about himself/herself with the class.
- Create a take home book using photos taken on a field trip or during a class activity. Students will share book with parents and return book the next day (class rotation).

23) Responds to questions in conversation using words and phrases in the primary language
- Discuss a favorite story by asking simple questions.
- Utilize questioning techniques to discuss a particular activity (e.g., discuss how they put a puzzle together, why they built a particular object in blocks).
- Use who, what, when, where, why, and how questions to promote conversation.
- Provide students with opportunities to ask questions using who, what, when, where, why, and how.

24) Participates in conversation while interacting with peers
- While engaging in dramatic play, students will interact with peers.
- Give opportunities to interact freely at set times (e.g., recess, lunch).

25) Recalls sequences of events
- Tell the sequence of a favorite story.
- Ask students to draw pictures of daily events and dictate to teacher (e.g., getting ready for school, getting ready for bed).
- Sequence events of the school day using photos.
- Use rebus picture cards in the cooking center to allow students to order steps followed in preparing a snack or food dish.

26) Uses positional words in proper context
- Play "Simon Says" using positional words.
- Demonstrate the use of positional words by using students and/or other objects.

27) Uses phrases and simple sentences
- Model telling about a drawing or painting using phrases or simple sentences.
- Provide opportunities for students to answer direct questions in phrases or simple sentences.
- Use a wordless book to let students tell the story using phrases and simple sentences.

28) Interprets pictures orally
- Hold up a picture (be sure to include famous artwork) and have the students tell about it.
- Have students bring a photo from home and tell about it for show and tell.

29) Uses new vocabulary and grammatical constructions in own speech
- Provide a sentence starter and have students complete sentence starter using new vocabulary.
- Model use of new vocabulary.
- Model correct grammar.

30) Repeats favorite rhymes and songs
- Provide many opportunities to listen, sing, and recite rhymes and songs.
- Sing nursery rhymes.

Begins to demonstrate phonemic awareness

31) Distinguishes sound units/syllables (clapping/stomping/finger tapping)
- Students and teacher clap, stomp, or finger tap to songs as they are sung.
- Students and teacher clap, stomp, or finger tap out the children's names.

32) Recognizes rhyming words
- Allow students to listen to stories that rhyme and pick out rhyming words when prompted.
- Engage students in poems, finger-plays and identify rhyming words.
- Sing songs together that have rhyming pairs.

33) Begins to notice beginning phonemes/sounds (no graphemes/letters)
- Display several photographs and name the pictures for the student to repeat the beginning sound.
- Repeat aloud words beginning with target sound (phoneme) emphasizing the first sound (phoneme).

Develops listening skills

34) Understands and follows oral directions
- Give oral directions and play "Teacher Says."
- Allow students to give simple directions to each other.

35) Listens attentively to a story
- Guide students to listen for specific details in a story.
- Read a story and ask guided questions.

36) Listens to music
- Allow students to draw while listening to classical music.
- Move together with students to the rhythm of the music (e.g., fast, slow).
- Allow students to pretend to play instruments as they hear them in music.

Pre-Kindergarten Benchmarks

Mathematics Language Development: Math Concepts

O - means teacher should be able to observe naturally throughout the day—possibly use anecdotal records.
I - Informal Assessment—those marked "I" have an assessment task attached.

Describes things by color, size, and/or shape

37) O - Sorts objects by color, size, and/or shape
38) I - Identifies color, size, and/or shape of objects
39) I - Recognizes color, size, and/or shape of objects in environment

Recognizes how things are alike (Comparisons)

40) O - Explores the concept of how things are alike through manipulative experiences
41) I - Identifies alike and different
42) O - Categorizes objects that are alike

Identifies objects that belong together (Classifies)

43) O - Selects objects that go together
44) I - Explains how things are related

Demonstrates understanding of positional words (Measurement)

45) O - Shows understanding of positional words (e.g., before, after, over, under)
46) O - Uses positional words correctly when communicating (e.g., first, next, last, over, under)

Develops a sense of numerical concepts (Number Sense)

47) O - Shows one-to-one correspondence
48) I - Counts objects
49) I - Identifies more, less, and same
50) O - Recognizes numbers

Recognizes patterns

51) I - Describes patterns
52) O - Reproduces patterns

Informal Assessments

Mathematics Language Development: Math Concepts

In developing informal assessments, teachers should consider what the relevancy is of completing the sample task. In the world of today, why do students need to be able to recognize their name? If the answer is to be able to identify themselves in a social setting, the sample task should reflect that need.

Guiding Questions	Task Sample
(38) Can the student identify the color, size, and/or shape of objects?	Provide the student with classroom materials such as attribute blocks and have the student identify • the color of the object, • the size of the object, and • the shape of the object, by responding to questions, organizing the classroom materials based on color, size, shape, and/or in conversation with the teachers.
(39) Can the student recognize color, size, and/or shape in environment?	The teacher will show a color, and the student will tell about something in the environment which is that color.
(41) Can the student tell how things are alike?	The teacher will give the student two objects, and the student will tell how they are alike.
(44) Can the student tell how two objects are related?	The teacher will provide at least three objects, and the student will explain how they are related. *Note: Students may give unusual explanations of how objects are related, but not necessarily incorrect based upon life experiences, so teachers must probe and ask students to explain in some detail how they came up with their answer.*

Guiding Questions		Task Sample
(48)	Can the student count objects?	Provide the student with objects. Have the student count objects and tell how many. As students place napkins or cups for snacks, they should be encouraged to count as they place one at each person's seat.
(49)	Can the student select the set that has more, less, or same?	The teacher will provide two sets of objects and ask the student to select the set that has more, less, or same.
(51)	Can the student describe a given pattern?	The teacher will provide a simple pattern and ask the student to describe the pattern (red, yellow, red, yellow).

Suggested Teaching Strategies

Mathematics Language Development: Math Concepts

Describes things by color, size, and/or shape

37) Sorts objects by color, size, and/or shape

Color:

- Use manipulatives to sort by color.
- Graph students' eye colors by allowing each to look in a mirror and determine their eye color, picking a corresponding color of construction paper and placing on a chart. The teacher will review the results with the class.
- Have students wearing a particular color stand up.
- Place pairs of socks in the dramatic play area and ask students to sort by color.

Size: (large/small)

- Use toys to sort by size.
- Use buttons to sort by size.
- Use attribute blocks to sort by size.

Shape:

- Furnish name tags with a different shape and color combination for each child (e.g., red triangle, red circle, green circle).
- Use attribute blocks to sort by shape.
- Make paper cut-outs of geometric shapes and have students sort according to shape.
- Use crepe paper to outline various objects in the room and discuss the shape outlined (all the rectangles outlined in blue crepe paper, all the circles in red and so on).

38) Identifies color, size, and/or shape of objects

Color:

- Play "Color Bingo," "Eye Spy," etc.
- Read color related books.
- Read any of the following books:
  - Blue Sea (Robert Kalan)
  - My Little Color Library (Dorling Kindersley)
  - Ten Black Dots (Donald Crews)
  - Red Leaf, Yellow Leaf (Lois Ehlert)
  - Living Colors (Karen Welch)
  - My First Book of Colors (Mary Packard)
  - Color Zoo (Lois Ehlert)
  - Purple, Green, and Yellow (Robert Munsch)
  - My Many Colored Days (Dr. Seuss)

- Colors (John Reis, Sara Lynn, Elizabeth Thorn, Gail Jeunesse, Istar Schwager, Peter Sloan)
- Mouse Paint (Ellen Stoll Walsh)
- Color Dance (Ann Jonas)
- Brown Bear, Brown Bear, What Do You See? (Bill Martin, Jr.)

Size:
- Provide an assortment of adult and child clothing. Have student identify large clothing and small clothing.
- Use flannel board and felt cut-outs to identify large/small. Read *Goldilocks and the Three Bears.*

Shape:
- Play "Shape Bingo."
- Have students sit in a circle, march in a square, make a triangle with their arms.
- Have a plastic bag with shapes in it. The teacher will call out a shape, and the student will pull that shape out.

39) Recognizes color, size, and/or shape of objects in environment

Color:
- Have students name objects found in the classroom showing a particular color and discuss other things of like color not in the room.
- Have students tell what color they are wearing.

Size:
- Encourage students to talk about things in the environment that are different sizes (e.g., trees–bushes; moms–babies).

Shape:
- Have student name shapes of things in their home and at school.
- Guide students to name objects that are circles, such as a clock.

Recognizes how things are alike (Comparisons)

40) Explores the concept of how things are alike through manipulative experiences
- Provide students with manipulatives and have them tell how they are alike (e.g., attribute blocks, pattern blocks, buttons, clocks, coins).

41) Identifies alike and different
- Have students discuss how objects are alike.
- Give students a sand pail with objects to investigate. Students will tell how their objects are alike (e.g., they are all yellow, they are all smooth, they are all pencils).

- Display a digital clock and an analog clock. Have the students tell how they are alike and different.

42) Categorizes objects that are alike
- Given various nature items such as acorns, leaves, shells, etc., students will sort items according to similar attributes. The teacher may make word/picture labels for each category.
- Provide a sack of various coins. Have the student stack like coins together.
- View a video or supply picture cards that demonstrate the difference in day and night. Have the student denote day and night by standing or sitting.

Identifies objects that belong together (Classifies)

43) Selects objects that go together
- Provide three objects and allow students to select the two that go together.
- Match photographs of objects that go together.

44) Explains how things are related
- Allow one student to select an object from a group of objects provided by the teacher. Let another student choose the object that goes with the object that was selected and tell why.
- Provide several boxes with different pictures on each one. Have a variety of objects that will go with the pictures. For example: picture on box – toothpaste, object – toothbrush. Have students tell how these things are related.

Demonstrates understanding of positional words (Measurement)

45) Shows understanding of positional words (e.g., before, after, over, under)
- Give each child a button and an index card. Have students place the button as the teacher gives directions. Let the students take turns giving directions and performing the actions.
- Have students act out a story such as "Little Mouse," using a large cardboard box.

  Little Mouse lived inside a big box where it was cozy and safe. One day, Little Mouse crept outside its box house and went looking for a piece of cheese. All at once Little Mouse saw a hungry cat—MEOW!! Little Mouse ran back inside the box house quickly. Little Mouse thought the cat was gone and crept outside again. MEOW!! Little Mouse heard the cat. Back inside ran Little Mouse. This time Little Mouse waited until night when the cat was asleep to go outside. The Little Mouse was able to find some cheese and get back inside the box house before the cat awoke.

- Ask the students to trace (or draw) four shapes such as a square, circle, rectangle, and triangle on construction paper. Next, have students glue beans or macaroni over, under, inside or outside each shape.

46) Uses positional words correctly when communicating (e.g., first, next, last, over, under)
- Use nursery rhymes or nursery rhyme songs in guiding students to demonstrate positional words. For example, up-down ("Hickory, Dickory Dock"); inside-outside ("Peter, Peter, Pumpkin Eater"); over-under ("Hey, Diddle, Diddle," "Jack Be Nimble").
- Give each student a puppet or a beanbag. Begin by telling the students where you are putting your puppet: "My puppet is over my head." Have the students copy you, then ask: "Where is your puppet?" The students respond "The puppet is over my head." Ask students, " Where else can the puppet be placed?"
- Demonstrate first/last as the students line up for lunch, etc. Have the first and last student call out "first" and "last" to signal that the group is in line and ready to proceed.

Develops a sense of numerical concepts (Number Sense)

47) Shows one-to-one correspondence
- The student will set the table in the home-living center (one plate-one person).
- Provide toy garages (empty milk cartons) and toy cars. Have the students match one car for each garage.

48) Counts objects
- Provide opportunities for students to count sets of objects (e.g., trees, lunchboxes, beans, counters, swings, chairs).

49) Identifies more, less, and same
- Define the terms *more*, *less*, and *same* by using correct examples in the classroom.
- Provide objects to graph, such as modes of transportation to school. Create graph and discuss results using the terms *more*, *less*, and *same* amounts.
- Have students arrange three different sets of objects (e.g., coins, blocks). Ask: Which set has more? Which has less? Are any the same?

50) Recognizes numbers
- Number the tables so that students will tell the number of the table where they are sitting.
- Play Number Bingo in small groups.
- Place student telephone book in dramatic play area. Engage in role play with students to use the book when dialing a number on the play telephone.

- Use sale papers with grocery ads to help small groups of students plan a role-playing shopping trip.

Recognizes patterns

51) Describes patterns
- The teacher will model a simple pattern (clap, snap, clap, snap), and the student will tell about this pattern.
- Use a calendar to show the pattern of days of the months (e.g., November 1st - turkey, November 2nd - Cornucopia, November 3rd - turkey, November 4th - Cornucopia.) Predict what comes next.

52) Reproduces patterns
- The student will reproduce patterns modeled by teacher such as boy, girl, boy, girl, etc.
- Demonstrate rhythmic pattern (e.g., after standing, stomp, clap, clap, stomp, clap, clap).
- Sing and act-out the song "When You're Happy and You Know It."
- Provide objects to reproduce patterns.

Pre-Kindergarten Benchmarks

Social/Emotional Development

O - means teacher should be able to observe naturally throughout the day—possibly use anecdotal records.
I - Informal Assessment—those marked "I" have an assessment task attached.

Plays by self and in small groups of two to five (Collaborative Play)

53) O - Uses acceptable ways of joining in an on-going activity or group
54) O - Begins give and take cooperative play
55) O - Waits his/her turn in playing games or using materials
56) O - Respects others' feelings in the context of group play
57) O - Shows pleasure in being with and having friends
58) O - Uses appropriate language in the context of social play
59) O - Interacts non-verbally with others with smiles, waves, and nods, as well as, responding to nonverbal cues

Develops listening skills

60) O - Follows simple (one-step) directions
61) O - Shows sensitivity to others as they speak in small or large group settings (taking turns in speaking in small/large group settings)
62) O - Listens attentively to adults when interacting with them

Develops problem-solving skills for resolving conflicts

63) O - Approaches others positively
64) O - Negotiates solutions and develops compromises with others in an age-appropriate manner
65) O - Develops an awareness of the feelings of others
66) O - Uses words rather than physical means to solve problems and express anger
67) O - Expresses own rights and needs appropriately
68) O - Begins to accept the consequences of own actions

Assumes age-appropriate responsibilities in the classroom

69) O - Participates in routines (large and small group time, transition time, and so forth)
70) O - Demonstrates appropriate use and care of classroom and personal materials
71) O - Begins to understand the concept of personal property versus community (classroom) property or the property of others
72) O - Understands the need for rules and begins to follow them
73) O - Makes relevant contributions to group time activities

Develops a positive self-concept

74) O - Offers and accepts affection and appreciation
75) O - Shows acceptance of individuals from different family configurations, cultural, and/or racial groups through positive interactions with class members and school staff
76) O - Expresses wishes and preferences clearly in an age-appropriate manner
77) O - Shows interest in others by exchanging information with them
78) O - Takes initiative in problem-solving
79) O - Takes pride in accomplishments and accepts disappointments without loss of interest in or focus on the activities at hand

Develops age-appropriate self-control

80) O - Begins to accept not being first at a game, activity, or classroom routine such as lining up
81) O - Expresses frustrations and anger effectively without harming self, others, or property (verbal or nonverbal responses)
82) O - Uses restraint and does not call inappropriate attention to self

Develops imagination and creativity

83) O - Uses descriptive language in role playing
84) O - Uses the arts (e.g., visual arts, music, dance) to express thoughts and feelings about the world in which the student lives
85) O - Uses words and pictures to create stories that describe feelings

Observational Assessment for Working with Families

Social/Emotional Development

To ensure the child's development, the family and school must communicate and cooperate for the child's benefit. A supportive climate in the school setting will include:

- *shared responsibilities between families and teachers,*
- *a focus on the child's and family's strengths, and*
- *a commitment to forming authentic relationships with families.*

Guiding Questions	Task Sample
Are there authentic relationships with families?	Post photographs of students and their families and encourage students to discuss their photographs. Invite family members of students to share about their home culture and language with the class. Teachers greet students and families when they arrive and depart and communicate with weekly notes and/or telephone calls. Teachers mail positive communication to the students/parents as a way of "special communication" throughout the year. Teachers use electronic mail, if available, to communicate with parents. Districts establish a plan by which teachers visit students in homes. Districts schedule programs and conferences at times that are conducive to working parents (both night and day). Districts develop a team approach, whereby, teachers work with the same group of students in a multi-year situation. Teachers use materials that avoid stereotyping.

Guiding Questions	Task Sample
Are family involvement strategies utilized?	Program mission is clearly communicated and parents have opportunities for input. Teachers share anecdotal notes with parents through formal conferencing and at other times as needed. Family members join students for activities during the school day. Districts plan and implement opportunities for families to gather for fun and educational activities. Teachers develop a message system that regularly allows for parents and teachers to share information about students. Programs provide specific volunteer opportunities for both working and non-working family members. Districts develop and implement strategies to recognize and acknowledge the family and its role in the education of the students.
Are students' and families' strengths recognized?	Invite families to share the students' home culture and language in the classroom. Cook and serve foods from families' contemporary cultures. Avoid stereotyping any group through materials and objects. Take trips to museums and cultural resources of community.

Suggested Teaching Strategies

Social/Emotional Development

Teachers need to be mindful that their modeling of positive and intended behaviors that are listed in the benchmarks is the most effective strategy for intervention/instruction of the student.

Plays by self and in small groups of two to five (Collaborative Play)

53) Uses acceptable ways of joining in an on-going activity or group
- Provide appropriate play areas (housekeeping, blocks, sand/water, and dramatic play).
- Model observation of on-going play and suggest ways of joining in.

54) Begins give and take cooperative play
- Provide opportunities for play and acknowledge cooperation.
- Pair students having difficulties with social skills with those who exhibit strong social skills.

55) Waits his/her turn in playing games or using materials
- Provide opportunities for small group participation, thus decreasing wait time.
- Model taking turns and acknowledge acceptable behavior.

56) Respects others' feelings in the context of group play
- Model respectful behavior and acknowledge respectfulness in others.
- Use literature that demonstrates respect for the feelings of others.
- Provide opportunities for discussion of feelings and, in some cases, provide language for students having difficulty expressing their feelings.

57) Shows pleasure in being with and having friends
- Model pleasurable behavior through smiles, hugs, and pats on the back to all students in the classroom.
- Reinforce with words the emotions of students who show pleasure when with friends.

58) Uses appropriate language in the context of social play
- Provide opportunities for role playing with puppets and skits to demonstrate use of appropriate language.
- Provide language for students having difficulty expressing themselves.
- Read books and lead discussion about children at play.

59) Interacts nonverbally with others with smiles, waves, nods, as well as responding to nonverbal cues
- Model communicating non-verbally.
- Offer opportunities to dramatize ways of communicating non-verbally.

Develops listening skills

60) Follows simple (one-step) directions
- Give one-step directions. Teacher says, "Hand me the book," etc.
- Role-play with student being teacher and giving one-step directions. Student says, "Walk to the door," etc.

61) Shows sensitivity to others as they speak in small or large group settings (taking turns in speaking in small/large group settings)
- Model a friendly, positive, courteous manner when listening and responding to children's comments and suggestions.
- Call children by name.
- Position self at the same physical level as the student.

62) Listens attentively to adults when interacting with them
- Play listening games such as "Simon Says", "I Spy", "Listening Lotto."
- Encourage children to look at the person who is talking. Also, teachers should discuss the importance of keeping hands and feet still and not talking when others are talking.
- Listen attentively when conversing with student.

Develops problem-solving skills for resolving conflicts

63) Approaches others positively
- Discuss how your body language and facial expressions can give a friendly or unfriendly look.
- Role-play acting out different facial expressions and body postures to help children identify what is friendly.
- Arrange the environment so that a minimal number of "no's" are necessary for interactions.

64) Negotiates solutions and develops compromises with others in an age-appropriate manner
- Guide children to resolve conflict and model skills that help children to solve their own problems.
- Encourage children to role-play and verbalize possible resolutions to the problem.

65) Develops an awareness of the feelings of others
- Listen and acknowledge children's feelings and frustrations and respond with respect.
- Encourage children to be sensitive to the feelings of others by eliciting responses as to how the child would feel in similar circumstances.

- Use literature to help children understand feelings that are shared by others: books on anger, fear, happiness, loneliness, and change should be used weekly.

66) Uses words rather than physical means to solve problems and express anger
- Establish and maintain a supportive environment.
- Encourage children to describe the problems they encounter, and give them time to generate their own solutions.
- Develop classroom rules which reflect non-violent resolution of conflict.

67) Expresses own rights and needs appropriately
- Allow time for children to talk about what they see, do, and like.
- Model respect and acceptance of individual responses of children.

68) Begins to accept the consequences of own actions
- Encourage children to make choices and decisions throughout the day.
- Help children decide between acceptable and unacceptable choices, and discuss consequences that result.

Assumes age-appropriate responsibilities in the classroom

69) Participates in routines (large and small group time, transition time, and so forth)
- Clearly communicate daily routines, provide appropriate time for practice, and acknowledge success.

70) Demonstrates appropriate use and care of classroom and personal materials
- Clearly communicate expectations for the use and care of materials. Use verbal explanations and pictures.

71) Begins to understand the concept of personal property versus community (classroom) property or the property of others
- Define and demonstrate the difference in classroom property, personal property, and property of others (e.g., a puzzle is classroom property; a lunchbox is personal property).
- Communicate the need for care of classroom and personal property, as well as property of others.

72) Understands the need for rules and begins to follow them
- Clearly communicates the need for rules and involve students in the establishment of the classroom rules.
- Provide opportunities for role-playing and for discussion of the need for rules.
- Use the classroom rules to help students evaluate behavior.

73) Makes relevant contributions to group time activities
- Encourage all students to participate regularly.
- Acknowledge students' relevant contributions.

- Place students strategically during group-time to facilitate participation.
- Use questions to guide discussion in the event focus begins to fade.

Develops a positive self-concept

74) Offers and accepts affection and appreciation
- Model a supportive relationship with students by treating students with kindness.
- Participate in one-on-one conversations with students at their eye level.

75) Shows acceptance of individuals from different family configurations, cultural and/or racial groups through positive interactions with class members and school staff
- Initiate activities and discussions to build positive self-identity and teach the value of differences.
- Provide books, materials, images, and experiences that reflect diverse cultures.
- Invite family members to share their family culture and history with students and celebrate diversity.
- Display student's work and photos of students and their families.

76) Expresses wishes and preferences clearly in an age-appropriate manner
- Build a sense of community by bringing each student's home culture and language into the shared culture of the classroom.

77) Shows interest in others by exchanging information with them
- Have parents sign students in and out daily.
- Make home bags to relay daily messages.

78) Takes initiative in problem-solving
- Provide opportunities for students to initiate activities, develop control of their bodies, and demonstrate self-help skills.

79) Takes pride in accomplishments and accepts disappointments without loss of interest in or focus on the activities at hand
- Encourage students to draw pictures and tell stories about self, family, and cultural practices.
- Provide cooperative games and activities which teach cooperation instead of competition.
- Create a classroom environment that is not punitive when mistakes are made and recognizes that mistakes are a part of learning.
- Provide opportunities for students to accomplish tasks independent of teacher assistance.

Develops age-appropriate self-control

80) Begins to accept not being first at a game, activity, or a classroom routine such as lining up
- Establish a procedure for being first and last in a line and explain that each student will have a turn.
- Model desired behavior and provide opportunity to practice cooperation.
- Model or demonstrate respectful ways (taking turns) of interacting with others.

81) Expresses frustrations and anger effectively without harming self, others, or property (verbal or nonverbal responses)
- Assist students in developing vocabulary to express feelings.
- Assist students in developing coping strategies to deal with anger by modeling.

82) Uses restraint and does not call inappropriate attention to self
- Establish ground rules for group time participation.
- Encourage all students to participate appropriately by modeling.
- Use literature to teach the concepts and skills necessary to exercise restraint (e.g., Read Rainbow Fish and discuss behavior).
- Reinforce students exhibiting behaviors that show understanding of restraint.

Develops imagination and creativity

83) Uses descriptive language in role playing
- Model uses of descriptive language.
- Use show and tell in small group settings to develop descriptive language.
- Provide opportunities to develop language through reading and talking. Read literature with rich descriptive language on a daily basis.
- Play games, such as "Eye Spy", in which descriptive language is used.

84) Uses the arts (e.g., visual arts, music, dance) to express thoughts and feelings about the world in which the student lives
- Play various types of music and allow students to express feelings through moving with the music or painting or drawing.
- Provide art materials for creating objects of self-expression.
- Provide opportunities to describe students' art projects.
- Provide opportunities for students to develop plays and skits to express thoughts and feelings.

85) Uses words and pictures to create stories that describe feelings
- Read a story and draw a picture showing how the character feels.
- Allow students to dictate feelings about pictures drawn.
- Provide opportunities to describe personal feelings.

Pre-Kindergarten Benchmarks

Physical Development: Fine, Gross, and Sensory Motor Development

**These activities are critical for a foundation in cognitive abilities: emergent math and literacy. Further, socio-emotional development is strengthened. This enhances growth and learning towards self-awareness.*

O - means teacher should be able to observe naturally throughout the day—possibly use anecdotal records.
I - Informal Assessment—those marked "I" have an assessment task attached.

Attends to basic self-help skills (personal health and safety)

86) O - Uses appropriate language to convey needs and actions
87) O - Attends to daily routine tasks

Uses eye/hand coordination to perform fine motor tasks

88) O - Holds and turns page of a book correctly
89) O - Manipulates objects
90) O - Uses writing, drawing, art, and kitchen tools/manipulatives and the workbench with increasing skill and purpose

Demonstrates awareness and understanding of body and objects in physical space (gross and fine motor skills/personal health and safety)

91) I - Demonstrates use of positional words
92) O - Imitates body positions
93) O - Demonstrates balance and coordination

Shows judgment in interacting with play, materials, and equipment (gross and fine motor skills/personal health and safety)

94) O - Follows one and two-step directions with one object
95) O - Observes rules
96) O - Makes choices about materials and their use

Informal Assessments

Physical Development: Fine, Gross, and Sensory Motor Development

Guiding Questions	Task Sample
91) Can the student demonstrate use of positional words: on, under, front, behind, beside, over?	Provide the student with familiar objects to demonstrate their understanding of positional words. Ask the student where else the object might go to determine if the concept(s) has been internalized and that he/she has the language to describe the placement of the object: • Put the block <u>on</u> the table. • Put the doll <u>under</u> the table. • Put the ball in <u>front</u> of the table. • Put the crayon <u>behind</u> the table. • Stand <u>beside</u> the table. • Hold the bear <u>over</u> your head.

Suggested Teaching Strategies

Physical Development: Fine, Gross, and Sensory Motor Development

Attends to basic self-help skills (personal health and safety)

86) Uses appropriate language to convey needs and actions
- Assist the student in expressing needs and actions (e.g., "Will you help me zip my jacket?" or "Will you help me open my milk carton?").
- Direct the play of charades using self-help skills.

87) Attends to daily routine tasks
- Provide opportunities that allow students to brush teeth independently by:
  - Inviting a health care professional to demonstrate proper care of the body (e.g., teeth, eyes, ears).
  - Role-playing in dramatic play center with props (e.g., dolls, toothbrush, empty toothpaste containers).
  - Using a toothbrush and paint to practice tooth-brushing strokes.
  - Using songs or rhymes related to self-help skills (e.g., model the tune "Mulberry Bush" – "This is the way we brush our teeth, brush our teeth, brush our teeth…").
  - Placing related books in library and listening centers.
- Assist students in putting on shoes and socks by providing:
  - Opportunities for students to take off shoes and socks and put them back on.
- Guide students in washing and drying hands by providing opportunities to:
  - Pantomime/model appropriate steps.
  - Use verbal cues to show students importance of washing hands.
  - Allow one student to place a hand in shaving cream and shake hands with every student in the classroom. Observe hands and discuss observations.
- Provide opportunities to dress with increasing independence by:
  - Providing opportunities for students to manipulate a variety of fasteners (e.g., snapping, buttoning, zipping).
  - Dressing dolls in dramatic play center.
  - Manipulating a variety of fasteners during play in dramatic play center.
- Engage students in putting materials/belongings away appropriately by:
  - Encouraging students to store belongings in personal space (e.g., cubbies, shelves, coat rack).
  - Using transitional cues (e.g., clapping, hand signals, verbal cues, music) to help students bring order to the environment.
- Provide opportunities to attend to mealtime responsibilities (e.g., washes hands before handling food, feeds self with eating utensils, opens cartons, uses a napkin, cleans eating area) by:
  - Role-playing proper mealtime procedures/manners.
  - Modeling appropriate mealtime procedures in natural settings.
  - Using books related to mealtime to encourage discussion.

- Pouring juice or milk from a small pitcher.
- Guide students to care for self in toileting needs by providing opportunities to:
  - Model appropriate behaviors in natural situations.
  - Provide specific instructions regarding hygiene and correct use of facilities (e.g., washes hands after using the toilet).
  - Read books related to toileting (e.g., My Potty and Me).
  - Wipe nose with tissue.
  - Cover mouth when coughing or sneezing.

Uses eye/hand coordination to perform fine motor tasks

(Teachers providing opportunities for Pre-Kindergarten children to improve their hand and finger strength and control activities need to involve the small muscles in the hands, wrists, and fingers. These activities are critical for a foundation of literacy development in cognitive abilities: emergent math and literacy.)

88) Engages in language during play
- Ask open-ended questions using who, what, when, and where. "What you are doing?" "What are you building?" "When did this happen?" "Where is this taking place?"
- Ask cause/effect questions. (e.g., "What if this happened?" "What would you do if?").
- Provide opportunities for natural conversation to occur throughout the day (e.g., home living center, block center, art center).
- Put together puzzles (e.g., multi-level puzzles–3 to 12 pieces, including table and floor puzzles).
- Guide students to verbalize the process of placing puzzle pieces according to shape or picture clues. This helps the child determine the placement of puzzle pieces.

89) Manipulates objects
- Present students with materials (e.g., pop-it beads, rolling pins, tongs, pegs, hammers, clothes pins, play dough, clay, blocks, legos, lacing cards) for free exploration.
- Ask students to build a tower, road, or building with blocks (e.g., wooden, hollow, foam, and bristle blocks). If the student is unable to do so, model how to build various structures. Use pattern blocks to copy, extend, and/or design block structures. Knock down the structure and ask students to rebuild the structure.
- Provide opportunities for students to string beads or noodles to make necklaces.
- Direct students to use hole puncher to perforate various types of paper.
- Allow time to pick up coins and drop in piggy bank.
- Allow time for free explorations using sand and water. Provide various materials: aluminum foil, corrugated board, sponges, measuring cups, bowls, and nonstandard containers.
- Provide opportunities to practice carrying objects.

- Provide opportunities to throw and catch (e.g., bean bags, various sized balls made of different materials and textures).
- Allow students to remove and replace marker caps.

90) Uses writing, drawing, art, and kitchen tools/manipulatives and the workbench with increasing skill and purpose
- Direct students to place a piece of paper over textured surface (sandpaper letters) and rub a crayon over the top of the paper.
- Provide opportunities for students to finger write or draw in sand, pudding, or shaving cream.
- Guide using scissors to snip and cut playdough, newspapers, magazines, construction paper, sandpaper, tape, etc.
- Provide free exploration time with a variety of writing, drawing, and art tools/materials (e.g., scissors, crayons, markers, chalk, paintbrushes, glue, paste, clay, play dough).
- Provide opportunities to tear construction paper to represent shapes and objects.
- Use hands and fingers to pinch, roll, squeeze and pat pliable materials (e.g., peanut butter, play dough, clay, mud, sand, cookie dough, Jell-O, foam packing peanuts or packing bubbles).
- Observe students choosing emergent hand preference during material selection (e.g., manipulate screws/bolts, lids and containers, door knobs, keys/locks, gears).
- Students carry scissors and pencils with points down for safety.

Demonstrates awareness and understanding of body and objects in physical space (gross and fine motor skills/personal health and safety)

(The teacher provides opportunities for Pre-Kindergarten children to improve balance, coordination, strength, stamina, and control of large muscles. Activities need to involve the development of the entire body.)

91) Demonstrates use of positional words
- Model the use of positional words while playing a game such as "Simon Says," "Charades," or "Follow the Leader."
- Integrate music or nursery rhymes, and dance to teach contrasting positional words, such as over/under, in/out ("Hey, Diddle Diddle"; "Jack and Jill"; "Going on a Bear Hunt"; "Grand Ole' Duke of York").
- Ask direct questions. For example, "Where is the bear?" If the child is unable to respond, say, "The bear is under the table". "Where is the bear?"
- Set up an obstacle course of chairs, sticks, boxes, and give directions such as "Go over the box, under the chair, beside the stick."

92) Imitates body positions
- Use a mirroring technique to have students imitate the actions of the teacher.
- Use language to describe specific body positions and movements during creative movement activity (e.g., I am a bird flying over a tree).

93) Demonstrates balance and coordination
- Use a variety of musical selections (e.g., jazz, classical, rhythm and blues, country) during activities such as crawling, walking on a line, walking around a circle or hopping on one foot.
- Allow students to climb objects under four feet (e.g., ladder, stairs, slide, knotted rope).
- Direct skipping and running (e.g., quick stops, full circle turns, half circle turns, turning corners, fast, and slow).
- Use pulling and pushing toys (e.g., rope, wagon, swing).
- Pedal and steer scooters and tricycles.
- Practice together, walking up and down stairs with alternating feet and with and without holding the rail.
- Provide opportunities for students to hit a target with an overhand throw.
- Provide practice in throwing a ball in a specified direction.
- Allow students to throw, catch, kick, and bounce various sized balls made of different materials and textures.
- Direct students to adjust arms and body to direction of a ball.

Shows judgment in interacting with play, materials, and equipment (gross and fine motor skills/personal health and safety)

94) Follows one and two-step directions with one object
- Give oral directions using games, such as "Mother, May I" and "Simon Says."
- Role-play to demonstrate specific directions.
- Express specific directions to the students as each part of the day progresses.
- Provide art experiences that require one and two-steps.
- Allow students opportunities to give simple directions to each other.

95) Observes rules
- Read Peter Rabbit and ask what were the consequences of breaking the rules. "What rules do we have at school?" "Why are they necessary?"
- Review rules daily and use verbal reminders.
- Provide opportunities to dramatize what happens if one doesn't follow rules.
- Play simple games such as "Candy Land" and "Drop the Handkerchief."
- Direct students to stand far enough away from swings to avoid injury.

96) Makes choices about materials and their use
- Provide opportunities for free choice among learning centers and materials within centers.
- Assist students in verbally expressing their choices and actions. "Which center did you choose?" "What do you plan to do there?"

Pre-Kindergarten Benchmarks

Scientific Investigation

Science can be one of the most engaging and child-centered components of the preschool curriculum. Active engagement in science activities can complement language development and mathematical thinking. Science is an area in which humans never stop learning. Therefore, teachers should model attitudes of questioning, curiosity, experimenting, and making tentative conclusions based on data.

O – means teacher should be able to observe naturally throughout the day-possibly use anecdotal records.
I – Informal Assessment-those marked "I" have an assessment task attached.

Develops awareness of living and non-living things

97) I - Names and describes plants, animals, and humans
98) I - Explores plants, animals and human life cycles
99) O - Recognizes the needs of living things
100) I - Observes and describes characteristics of non-living things

Develops awareness of the five senses

101) I - Recognizes the five senses and body parts that utilize the five (5) senses
102) O - Identifies tastes and smells
103) O - Identifies sights and sounds
104) I - Sorts materials by texture

Engages in practices to promote routine good health, nutrition, and safety

105) O - Observes and demonstrates a daily routine of healthy habits
106) O - Recognizes and selects healthy foods
107) O - Demonstrates appropriate safety skills

Develops awareness of observable properties of objects and materials

108) O - Recognizes properties such as color, size, shape, state of matter and compares weight, texture, and temperature
109) O - Recognizes and demonstrates use of positional and motion words
110) O - Engages in simple investigation

Develops awareness and appreciation for the environment

111) O - Explores the idea that the earth includes the ground, water, and sky
112) O - Explores caring for the environment
113) I - Understands time-related vocabulary
114) O - Describes weather

Engages in simple investigations using science processes

115) O - Becomes aware of investigative process

116) O - Makes careful observations using all of the senses
117) O - Describes, compares, sorts and classifies, and orders
118) O - Uses a variety of simple tools to extend observations
119) O - Explores materials, objects and events and notices cause and effect
120) O - Engages in simple investigations
121) O - Describes and communicates observations, results, and ideas
122) O - Works collaboratively with others

Informal Assessments

Scientific Investigation

In developing informal assessments, teachers should take into consideration that student's abilities in science are highly correlated to their abilities and willingness to communicate. Therefore, a variety of assessment opportunities are necessary. Options include oral language, demonstration of understanding through manipulation of objects, acting out situations with physical movement and body language, drawings, and use of dramatic play.

Guiding Questions	Task Sample
(97) Can the student name and describe familiar plants and animals?	Show pictures or models of animals. Ask the student to name and tell about them. Show pictures of familiar plants (vegetables, trees, shrubs, grass.) Ask the student to name and tell about them. Show pictures or models of men, women, boys, and girls for the student to identify. Ask the student to identify himself/ herself as a boy or girl and tell some things about his/her physical appearance and abilities.
(98) Can the student sequence simple pictures of plant, animal and human life cycles?	Provide pictures that show life cycles (baby, preschooler, adult; egg, tadpole, frog; seed, seedling, large plant) and ask the student to tell you about which picture comes first.
(100) Can the student name and tell about familiar non-living things?	Show non-living materials (cup of water, rock). Ask the student to name them and tell what kind of things each object requires. Ask simple questions such ask, "Do rocks eat food?" "Does water have a family?"

(101) Can the student recognize the five senses and body part each utilize?	Show picture of body parts (nose, ear, mouth, fingers and eyes). Ask students to identify senses that match each.
(104) Can the student sort things or objects?	Provide a variety of shoes and gloves. Allow the students to sort the objects into two (2) groups.
(113) Can the student describe night and day?	Provide the student with pictures of night and day scenes and ask the student to tell about the night picture and the day picture.

Suggested Teaching Strategies

Scientific Investigation

Develops awareness of living and non-living things

97) Names and describes plants, animals, and humans
- Collect plants and insects during a nature walk. Discuss and label plants (sort leaves by color and shape) and insect parts. Display on science table for observation with a magnifying glass.
- Take a field trip to a garden center, farm, pet store, zoo, or aquarium and set-up dramatic play areas in classroom after each visit.
- Match adult animals to their young using picture cards. Match animals with their silhouettes.
- Mimic movement of a favorite animal.
- Classify animals by feather, fur, sounds, and habitats.
- Act out a seed growing into a flower.
- Outline students' bodies on large butcher paper and allow students to draw and color body parts. Discuss parts of the body.
- Display students' baby pictures on a wall. Discuss how they looked then and now.
- Observe and discuss the different characteristics of people (hair, eyes, skin).
- Provide quality experiences with senior adults.

98) Explores plant, animal and human life cycles
- Display tadpoles and caterpillars in an aquarium and observe activity.
- Sequence the growth of a plant by planting beans or a bulb.
- Soak bean seeds overnight, when they open examine them with a magnifying glass.
- Discuss the cycle of a tree and its uses for lumber and paper. Read a book about trees.

99) Recognizes the needs of living things
- Place plants in classroom for students to water.
- Place small animals in classroom for students to care for and observe.
- Discuss different places people live (apartments, houses, mobile homes) and places animals live (cave, ground, nest, barn, water).
- Hang a bird feeder outside and allow students to observe birds feeding.

100) Observes and describes characteristics of non-living things
- Display an assortment of rocks. Sort by size, color, and texture, and observe with a magnifying glass. Place rocks in water to show contrast when wet and dry.
- Provide different types of soil for students to observe, feel and compare.
- Discuss the difference between real animals and stuffed animals.

Develops awareness of the five senses

101) Recognizes the five senses and body parts that utilize the five senses
- Read literature and sing songs about the five senses.
- Play "Simon Says" touch your nose, ears, mouth, eyes, hands, and tongue. Ask: "What do we do with our nose, ears, mouth, eyes, hands, tongue?"
- Prepare a matching game of the body parts that utilizes the five senses.
- Prepare five same-size, plastic jars containing one of these: small pretzel/taste, bell/sound, color cubes/sight, cotton balls/touch; cinnamon stick/smell. Allow the students to discuss the contents of each jar.

102) Identifies tastes and smells
- Students squeeze juice from oranges, limes, grapes or lemons. Have a party to determine interesting taste and smells.
- **Experiment**: Popcorn and the Five Senses. Ask questions such as: "Do you use all of the senses when making and eating popcorn?" "Do the kernels have an odor?" "What sense organ did you use?" Describe the appearance of the kernels. "What sense organ did you use?" "How do the kernels feel?" "What sense organ did you use?" "Which senses have not been used?" "As the popcorn popped, what sense organ did you use?" "Which sense organ was not being used when observing the popcorn?" "Do you detect a smell now that the kernels have popped?" "What sense organ did you use?" Describe the change in the appearance of the kernels. "How does the popcorn taste?" "Did you use all your senses?" "Can you name all the senses we used?"
- Take a field trip to a restaurant or cafeteria. Discuss the different smells inside and outside the restaurant. Ask questions such as: "Were there any unpleasant smells?" "Would spoiled food smell unpleasant?"
- **Experiment**: Develop smell jars using playdough and various flavors. Make a recipe of playdough, mix in flavored Kool-Aid, and place in plastic salt shakers. Prepare a picture graph of the scents such as a picture of a strawberry for the strawberry smell, a picture of grapes for the grape smell, etc. The students will identify the smell and place the shaker on the appropriate picture. The students will compare pleasant and unpleasant smells. Ask questions such as: "Which senses did you use in this activity?" "Which smells were most readily recognized and guessed correctly, incorrectly?" "Were there any containers that everyone guessed correctly?"

103) Identifies sights and sounds
- Sing "Five Little Monkeys Jumping on the Bed." Begin singing loudly and then soften the sound as you go through the verses.
- Use classroom musical instruments to make sounds. Discuss high and low sounds.
- Take the students on a "listening walk" outside and inside the building.
- Have the students hold their hands over their ears and listen to part of a book being read. Discuss absence of sound for someone who cannot hear. Have

the students cover their eyes and move about the group. Discuss how they felt when they covered their eyes and moved around.

- ***Experiment***: How Are Sounds Made? Place a piece of wax paper over the end of a cardboard tube or cardboard toilet paper roll, secure with a rubber band. With a pencil, punch a hole in the cardboard, about two inches from the wax paper. Hum into the open end. You have made a kazoo. Ask: "How can you make a quiet sound with a kazoo?" "How can you make a loud sound?" Hum through the kazoo and place your hands on the wax paper. "What do you feel?" Place your mouth to the open end of the kazoo, but do not blow or hum. Feel the wax paper. "Does it vibrate?" Name some quiet sounds. Name some loud sounds.

104) Sorts materials by texture

- Finger paint using different textures and materials.
- Create rubbings by having the students rub a crayon over paper held against a leaf, concrete walls, etc.
- Create texture collages with a variety of materials: yarn, cotton, sandpaper, lace, etc.
- **Experiment**: Opposite Textures. What makes some objects feel smooth and some feel rough? **Procedure**: Divide the students into two groups. Have a variety of rough and smooth objects available or have the students walk around the room and collect rough and smooth items. Compare the differences between the objects.
  - Describe the surfaces of smooth objects (even, lumpy or no lumps).
  - Describe the surface of rough objects (uneven, scratchy, etc.).
  - Blindfold a student and place one of the objects in his/her hands. Ask the student to feel the object and guess what it is. Repeat the activity using different students and objects.

Engages in practices to promote a routine of good health, nutrition, and safety

105) Observes and demonstrates a daily routine of healthy habits

- Develop and display a word picture chart for appropriate technique for washing hands. Demonstrate the procedure and post chart above the sink where the students wash their hands.
- Using the daily menu at mealtime, discuss how eating appropriate foods makes students' strong and healthy.
- Invite a dentist to visit the class and model appropriate tooth brushing procedures and to talk with the students about what happens when they go to the dentist.
- Acquire toothbrushes and allow students to brush teeth on a daily basis. Read books about going to the dentist.
- Put a small tub of water in the housekeeping area. Allow students to bathe baby dolls.
- Explain and demonstrate how to use a tissue when you sneeze or when you blow your nose. Model washing hands after using a tissue.

106) Recognizes and selects healthy foods
- Place empty containers of healthy foods in the dramatic play area (oatmeal boxes, milk carton, raisin boxes, orange juice containers). Provide samples of the foods that were in the containers for students to taste. Also include unhealthy foods (potato chip bags, candy wrappers, cupcake boxes). Discuss why certain foods are healthy and unhealthy.

107) Demonstrates appropriate safety skills
- Conduct monthly fire, tornado and bus drills.
- Conduct weekly safety activities that include, but are not limited to practicing seatbelt use and how to react to the possibility of a fire in a house.
- Play games that practice observation of traffic signs and lights.
- Discuss appropriate rules for the classroom.
- Visit a fire and/or police station.

Develops awareness of observable properties of objects and materials

108) Recognizes properties such as color, size, shape, state of matter, and compares weight, texture, and temperature
- Provide opportunities for students to describe color, shape, size, and texture of table toys.
- Allow students to observe the physical changes in materials.
- Record students' height and weight on a chart. Discuss differences.
- Provide opportunities for students to observe/experience the difference in temperature in the shade, in the sun, and in different seasons of the year.
- Provide opportunities to mix colors and observe the changes (finger paint, food color).
- Provide opportunities to use water and brushes for outdoor painting. Discuss evaporation.

109) Recognizes and demonstrates positional and motion words
- Play games such as "Simon Says" or "Follow the Leader."
- Integrate music, nursery rhymes, and dance to teach contrasting positional words. Examples: "Going on a Bear Hunt"? Ask the question, " Where is the bear?" If students are unable to respond, say, "The bear is under the table."

110) Engages in simple investigation
- Introduce experiment with movement using ramps and balls in block center.
- Make a bubble solution and provide different kinds of bubble blowing tools.
- Provide opportunities for students to use a tape recorder to record their voices. Play the tape for the students and have them identify themselves and others.
- Provide a collection of objects both metal and non-metal for students to use to explore what a magnet will and will not attract.

- Provide opportunities for small group participation in sink and float activities.
- Talk about balance. Use blocks, teeter-totter, and weights to allow students practice balancing.
- Provide opportunities for students to use magnifying glass to examine various materials and objects.
- Equip an outdoor science area with boards, boxes, levers, wheels and axles, pendulums, and pulleys (clothes lines).

Develops awareness and appreciation for the environment

111) Explores the idea that the earth includes the ground, water, and sky
- Visit a stream, pond, or lake (take photos, paint pictures).
- Provide water table with various items (funnel, different size cups, sieve) available to use to explore water movement.
- Walk or run up a hill, discuss feelings.
- Lie on ground and look at sky. Ask: "What do you see?" "How does it make you feel?" "What does it make you think of?"
- Discuss the consistency of the earth. Use a sand table for exploring dirt and sand.
- Fly kites.

112) Explores caring for the environment
- Take a walk and collect items of interest (man-made and/or natural) found in the environment. Invite visitors into the classroom to discuss water and/or air pollution, and other environmental issues.
- Label a recycling box and allow students to collect paper and/or cans.
- Beautify a space near a classroom; create a flower garden.
- Make a habitat for birds, animals, or butterflies.

113) Understands time-related vocabulary
- Discuss sunset, sunrise, temperature (warm and cold).
- Ask questions about night/daytime. "What do we do at night?" (eat, sleep, turn on lights). "What do we do in the daytime?" (work, play). Draw night pictures - chalk on black paper.
- Collect tools used at night (flashlights, nightlights) and discuss how they allow you to see when it is dark.

114) Describes weather
- Discuss the weather each day.
- Listen to weather reports on the TV or radio.
- Dictate experience charts about how the weather makes you feel and how the weather determines the type of clothes you wear. Provide a box of clothing from all seasons. Have the students identify clothes for each season. Allow center playtime with seasonal clothes.

- Adopt a tree and observe changes in the leaves during each season. Read the book, **A Tree is Nice.**
- Pick and eat seasonal fruit, vegetable, and nuts.

Engages in simple investigations using science process

115) Becomes aware of investigative process
- Show an object such as a balance scale or a magnet. Ask the question, "What can we to do with this?" Use open-ended questions with the students.
- At the beginning of a thematic unit, record students' questions. Review the questions as students find answers.
- Read a factual book. Generate a list of questions that might be answered in the book. Help students find answers to questions not answered in a book, by consulting other books, conducting investigations, or asking people.
- Generate a short list of questions to be answered before field trips or visits from resource people (fireman, policeman, farmers, health care workers, or meteorologists).
- Help students generate questions by modeling a variety of what if, what might happen, and how questions.

116) Makes careful observations using all of the senses
- Invite each student to bring an interesting item to class for other students to see and feel.
- Place a "new" fruit such as a mango or kiwi in a feely bag. Let students feel in the bag and describe the texture of the fruit, pull the fruit out of the bag, look at it, and tell more about it. Cut the fruit and compare the inside/outside. Encourage each student to smell and taste samples of the fruit and to describe the experience.
- Place small objects (pennies, marbles, and paper clips) in boxes. Students will try to determine what is in each box by shaking, twirling, and lifting. Open each box and discuss objects inside.
- Serve small squares of lime and strawberry gelatin. Let students explore the bounciness, describe the gelatin's surface and shape, smell and eat it. Make a graph of students' favorite gelatin.

117) Describes, compares, sorts and classifies and orders
- Fill two film canisters with 10 pennies inside one can and 20 inside the other. Let the students lift each canister and determine which is heavier or lighter. Verify the results using a balance scale.
- Use a specimen such as a live earthworm or caterpillar. Have the students describe it. Release the creature afterwards.
- Students sort collections of leaves by size, shape, and color.
- Invite students to stir small spoonfuls of salt and sand in plastic cups of water. Ask questions such as: "Did different things happen?" "What words help us describe how the mixture looks, sounds, and feels?"

118) Uses a variety of simple tools to extend observations
- Help students make fingerprints and then examine with magnifiers.
- Help students measure the heights of plants using small blocks or paper clips as measuring units.
- Show students how to use a balance scale to compare the mass of objects such as blocks and crayons, or a leaf and a twig.
- Use simple factual software, internet sources, reference books and literature to supplement hands-on experiences with science content.

119) Explores materials, objects, and events and notices cause and effect
- Facilitate play in the block area by helping students explore ways to build high towers, wide-span bridges and other structures.
- Provide clay and craft sticks in art area for students to use to design and create structures that hold together and balance.
- Facilitate student exploration of flexible materials to see if they bend or stretch.
- Plant seeds. Set seeds in a place that does not receive sunlight. Do not water the seeds. Encourage the students to predict what will happen. Then, have students draw conclusions at the end of a two to three week period.
- Allow the students to place ice cubes in various locations (indoors and outdoors). Observe and discuss what happens.

120) Engages in simple investigations
- Provide students practice in using higher level thinking skills.
- Help students generate questions. Ask open-ended questions such as, "What will happen if we mix soil and water and let the mixture stand a while?" "What classroom objects will magnets attract or stick to?" "Will all the balls bounce the same way?" "Do ants crawl in straight lines, curvy paths, or both?" "Does the gerbil like to eat lettuce, cereal, or both?" "What are some different ways we can sort our rocks?" "What might happen if we beat the drum very softly, then harder?" "What might happen if we clang the triangle then put our hands on it?" "This toy boat floats. How might we make it sink?" "This rock sinks. How could we make it float?"

121) Describes and communicates observations, results, and ideas
- Encourage informal conversations as students engage in hands-on investigations.
- Include descriptions of the students' questions, investigations, and findings in parent newsletters.
- Invite students to express their findings verbally and in sequential order.
- List examples on a chart as students discuss things such as: Plants we know about. Animals we saw outdoors. Things that are hot and cold. Ways to make the school grounds a nicer place. Things that float.
- Encourage students to describe objects. Ask open-ended questions such as: "What color is it?" "Does it bend?" "What can you tell about its texture?" "What more can we say about it?"

- Welcome a "buzz" of talk as students work together.
- Provide a variety of materials and props for students to use in expressing ideas through art forms and creative movement.

122) Works collaboratively with others
- Pair students with a partner and have them gather specific items during a nature walk. Have them organize and place items in empty egg cartons and share with the class.
- Have students take turns helping as you prepare a recipe such as scrambled eggs, gelatin, or trail mix.
- Pair the students. Let one student make a prediction and let the other student find out if the prediction is correct. Then reverse each student's role.

Resources

100 Small Group Experiences: The Teacher's Idea Book 3, Graves, M., Redleaf Press.

African-American Story Books and Activities for All Children, Second Edition, Moll, Patricia B., Hampton Mae Institute, 4104 Lynn Avenue, Tampa, FL 33603, 1994.

BRIDGES: Bringing Resources, Inclusions, and Developmentally Appropriate Gains to Every Child in Mississippi,
Mississippi Department of Education, (601) 359-3778
Mississippi Department of Mental Health, (601) 359-1288
Regional Mental Health Centers (specific to the area of the state where programs are located)
Mississippi Department of Human Services, (601) 359-4500 or (800) 345-6347/ Children and Youth, (601) 359-4555 or (800) 877-7882
Head Start State Collaboration Office (601) 359-3778

Count On Mail: Activities for Small Hands and Lively Minds, Schiller, Pam and L. Peterson, Kaplan.

Creative Art for the Developing Child, Second Edition, Cherry C., Fearon Teacher Aids, 1990.

Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth Through Age 5, Bredekemap, Sue; Editor: NAEYC.

Early Childhood Units for Science, Cerbris, Deborah Plona and Rice, Cheryl Ferchtenbiner, Teacher Created Materials, Inc., 1993.

Early Learning Activities, Krechevsky, Mara; Isberg, Emily and Chen, Jie Qi; Project Spectrum: Teacher College Press, New York and London, 1998.

Early Prevention of School Failure.

Educating Young Children, Hohmann, M. and D. Weikart, High/Scope Publications, Ypsilanti, MI, 1995.

Every Child A Reader, Mississippi Department of Education, (601) 359-3778.

Hands-On Science, Bates, Moni and Thaxton and Kati Porter, Carson-Dellosa's Publishing Company, Inc., Greensboro, North Carolina, 1991.

Learning Accomplishment Profile, Chapel Hill Training-Outreach Project, Sanford, Anne R. and Janet G. Zelman.

Math Their Way (Work Jobs I and II), Lorimar, Mary Baretta Lorton.

Mathematics Their Way-Summary Newsletter, Center for Innovation in Education.

More Than Counting: Whole Math Activities for Preschool and Kindergarten, Moomaw, S., and Brenda Hieronymos, Redleaf Press, 1995.

Mud Pies to Magnets, Williams, Robert E., and Sherwood, Elizabeth A., Gryphon House, Inc. Mt. Rainer, Maryland, 1987.

Nutrition Activities for Preschoolers, Cryer, Debby; Ray Adele Richardson; Harms, Thelma; Dale Seymore Publications, White Plains, New York, 1996.

National Clearinghouse on Family Support and Children's Mental Health, (1-800-628-1696).

Play and Playscapes, Frost, Joe L., Delmar Publishers Incorporated, (1992). (ISBN 0-8273-4699-9).

Preschool–4 Developmental Guidelines, Marsden, Dorothea B., Samuel J. Meisels, Judy R. Jablon, and Margo L. Dichtelmiller.

Preventing Reading Difficulties, National Research Council, National Academy Press, 1998.

Reading Instructional Intervention Supplement for Grades K-3, Mississippi Department of Education.

Rethinking the Brain: New Insights into Early Development, Shore, Rima, Redleaf Press, 1998.

Skillstreaming in Early Childhood, McGinnis, E., and A. Goldstein, Research Press Company, 1990.

Take A Look: Observation and Portfolio Assessment in Early Childhood, Martin, Sue, Redleaf Press.

The Carolina Curriculum for Preschoolers with Special Needs, Johnson-Martin, Nancy M., Ph.D.

The Complete Portfolio Book: A Step-by-Step Guide, Grace, C., and E. Shores, Gryphon House, Beltsville, MD., 1998.

The Creative Curriculum for Early Childhood, Dodge, Diane Trister and Laura J. Colker.

The Peaceful Classroom: 162 Easy Activities to Teach Preschoolers Compassion and

Cooperation, Smith, Charles A., Redleaf Press.

The Preschool Years, Galinsky, E., Ballatine Books, (ISBN 0-345-36597-6), 1998.

The Read Aloud Handbook, Fourth Edition, Trelease, Jim, Penguin Books, (ISBN 0-1404-69710), 1995.

Where is Thumbkin?, Schiller, Pam and Thomas Moore, Kaplan.

Software for Scientific Investigation

A.J.'s World of Discovery (Bright Start)
Bug Adventure Knowledge (Adventure)
Building Perspective (Sunburst)
Dinosaur Adventure (Knowledge Adventure)
Ping and Kooky's Cukoo Zoo (EA Kids)
Sammy' Science House (Edmark)
Zurk' Rain Forest Lab (Soleul Software)

Educational Materials

Language Development

- Balance scales
- Big books (36)
- Books with cassette recordings of stories (36)
- Children's literature books (general), examples could include picture, animal, alphabet, word/information books and nonsense stories and rhymes—favorite series (author, corduroy, etc.) (100)
- Children's literature books (instructional books)
- Child-size soft seating—large pillows, bean bag chairs, etc. (6)
- Classroom set of rhythm instruments
- Colored chalk
- Colored pencils
- Construction paper (12 x 8; 9 x 12) – red, yellow, green, blue, orange, purple, white, black, brown, and pink
- Craft sticks (variety of sizes)
- Crayons-basic eight (8) colors in a variety of sizes
- Easel brushes
- Easel paper
- Finger paint
- Finger paint paper
- Fiskar scissors (left/right)
- Flannel board/easel
- Flannel story kits
- Games-simple card games such as concentration, memory, matching, lotto, bingo
- Hand puppets (animals, people, creatures, etc.) (12)
- Head sets (5)
- Individual chalk/wipe off-boards
- Liquid tempera paint: red, yellow, green, blue, orange, purple, white, black, brown, magenta, turquoise, and peach (1 gallon/color)
- Listening station (1)
- Manilla paper
- Manipulative letters (magnetic, foam, etc.)
- Markers-basic eight (8) colors in a variety of sizes
- Modeling clay
- Newsprint paper
- Paint easels (free standing)
- Painting cups
- Pencils in a variety of sizes (20) – use as developmentally appropriate
- People puppets representative of the world population (7)
- Picture card library
- Pipe cleaners
- Puzzles (floor and developmentally appropriate)
- Record player/CD player/tape player

- Records/CDs/tapes
- School glue
- Story telling apron with story telling pieces
- Teaching carpet
- Tissue paper
- Variety of brushes (paint)
- Water color paints
- Yarn

Math Language Development: Math Concepts

- Assorted, colored related books
- Assorted picture cards
- Bean bags
- Books
- Color Bingo
- Consumables: construction paper, glue, beans, macaroni, crayons/markers/chalk, scissors, brown paper bags, craft sticks, paint, ink stamps, and ink pads
- Flannel board
- Flannel board cut-outs
- Flash cards
- Geoboards
- Manipulatives: large buttons, attribute blocks, beads, pattern blocks and cards, counters (variety), colored cubes, parquetry blocks, and cards
- Number Bingo
- Peg boards
- Puzzles
- Scale (balance)
- Shape Bingo
- Sorting box
- Variety of blocks for block center

Physical Development: Fine, Gross, and Sensory Motor Development

- Attribute blocks
- Balancing scale, variety of balls, hoola hoops, jump ropes, parachutes, bean bags, adjustable balance beam, basketball and hoop, walking stilts, and fabric tunnels
- Beads
- Beads/yarns
- Blank books
- Boats
- Bolts
- Books, variety of reading materials
- Bubbles/blowing materials
- Buttons
- Clay

- Clothes pins
- Clothes with various fasteners
- Collage materials
- Color pencils
- Computer with appropriate software
- Containers of various sizes
- Crayons (jumbo and regular)
- Digging and planting materials for gardening
- Dominoes
- Etch-A-Sketch
- Fabric
- Felt
- Felt board
- Finger paints
- Foil
- Food coloring
- Gears
- Glitter
- Glue
- Hammers
- Hole puncher
- Home-living dramatic play: telephones, dolls, clothes, mirrors, broom/dust pan, furniture, plates, utensils, and food
- Indoor/outdoor climbing system (4 feet or lower), ladders to loft structures (should have railing)
- Ink and ink pads
- Keys
- Knobs
- Lacing cards
- Locks
- Lotto games
- Magna Doodles
- Magnifiers
- Markers
- Multicultural paper
- Natural items for exploration
- Nesting boxes
- Noodles
- Paint markers
- Paper plates
- Paste
- Pegboards
- Pegs
- Pictures for thematic units
- Pie pans
- Playdough

? Puppets
? Rolling pins
? Sandpaper
? Scarves
? Scissors (blunt and fiskars)
? Scraps and common objects
? Screws
? Self-correcting and open-ended toys
? Sets of people, animals, and transportation vehicles
? Shape sorters
? Sift/strain objects
? Sink/float, molding, rolling, stirring, pouring, and scooping objects
? Siphen
? Small stapler
? Smocks
? Soap
? Sorting/matching objects
? Sponges
? Squeeze bottles
? Stamps
? Standard/non-standard measuring tools
? Stencils
? Streamers
? Tape
? Tempera paints
? Texture materials
? Tissue paper
? Tongs
? Toys
? Tricycles, wagons, scooters, pulling/pushing toys
? Unifix cubes
? Unit wood blocks, hollow blocks, soft blocks, connecting blocks, cardboard blocks
? Variety of large paper (different weights)
? Variety of paint brushes
? Water colors
? Water wheel
? Weaving materials
? Wikki Stixs
? Yarn

Scientific Investigation

- Aquarium
- Big magnet
- Bubble set
- Bug box

- Collection of insects, leaves, fur, bones
- Eye dropper
- Fountain
- Live plants
- Magnet, wind kit
- Magnifier, tripod
- Root farm
- Sand and water table
- Sift and explore sand kit
- Tornado tube
- Weather chart
- Weather puzzles

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

[X] This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

[ ] This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").

EFF-089 (1/2003)

p2031499